IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

AUTONOMOUS DEVICES LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	C.A. No. _____
	)	
TESLA, INC.,	)	**JURY TRIAL DEMANDED**
	)	
Defendant.	)	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Autonomous Devices, LLC ("Autonomous Devices") demands a trial by jury on all issues triable and, for its complaint against Defendant Tesla, Inc. ("Tesla"), hereby alleges as follows:

NATURE OF THE ACTION

1.   This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*.

2.   Tesla has infringed and continues to infringe at least one claim of each of U.S. Patent Nos. 10,452,974 ("the '974 Patent"); 11,238,344 ("the '344 Patent"); 11,055,583 ("the '583 Patent"); and 10,102,449 ("the '449 Patent") (collectively, the "Autonomous Vehicle Patents"); 10,607,134 ("the '134 Patent"); and 11,113,585 ("the '585 Patent") (collectively, the "Autonomous Vehicle Simulation Patents") (the Autonomous Vehicle Patents and Autonomous Vehicle Simulation Patents collectively referred to as the "Asserted Patents"). *See generally* Exs. A-F.

3.   Tesla directly infringes the Asserted Patents by making, using, offering to sell, selling, and/or importing into the United States products and related services that incorporate

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Autonomous Devices' patented autonomous driving, artificial intelligence ("AI") and simulation technology.

4.   Tesla indirectly infringes the Asserted Patents by inducing infringement by others, such as its consumers and end-users.

5.   Autonomous Devices seeks damages and other relief for Tesla's infringement of the Asserted Patents.

THE PARTIES

6.   Autonomous Devices is a Florida Limited Liability Company, with its principal place of business at 2271 Myla Lane, Melbourne, Florida 32935.

7.   On information and belief, Tesla is a company organized and existing under the laws of Delaware, with its principal place of business at 13101 Tesla Road, Austin, Texas 78725. Tesla may be served through its registered agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

JURISDICTION AND VENUE

8.   This lawsuit is an action for patent infringement arising under the patent laws of the United States, Title 35 of the United States Code.

9.   This Court has subject matter jurisdiction over the action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

10.   This Court has personal jurisdiction over Tesla in that they have, directly or through agents and/or intermediaries, committed acts within Delaware giving rise to this action and/or have established minimum contacts with Delaware such that the exercise of jurisdiction would not offend traditional notions of fair play and justice.

11.   On information and belief, Tesla regularly conducts business in Delaware, and purposefully availed itself of the privileges of conducting business in Delaware. In particular, on information and belief, Tesla, directly and/or through its agents and/or intermediaries, makes, uses, imports, offers for sale, sells, and/or advertises its infringing products and services in Delaware.[1] Tesla has knowingly placed, and continues to knowingly place, infringing products and services into the stream of commerce, via an established distribution channel, with the knowledge and/or understanding that such products and services are sold in the United States including in Delaware and specifically including this District.

12.   On information and belief, Tesla has derived substantial revenue from its infringing activity occurring within the State of Delaware and within this District and/or should reasonably expect its actions to have consequences in Delaware. In addition, Tesla has knowingly induced and continues to knowingly induce infringement within this District by advertising, marketing, offering for sale and/or selling infringing products and services within this District to end customers by at least:

- providing instructions within the Tesla iOS/Android application which facilitate, direct, or encourage the use of infringing functionality;

- providing instructions on vehicles which facilitate, direct, or encourage the use of infringing functionality;

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[1] As discussed later, the accused products and services include at least Tesla Models S, 3, X, and Y vehicles utilizing Software Version 9.0 and beyond ("Vehicles with Infringing Software") and/or the Dojo supercomputer ("Infringing Simulation Software"). Tesla Models S, 3, X and Y are collectively referred to as "Tesla Fleet Vehicles."

- publishing YouTube videos, including at least Tesla's various AI Days and Autonomy Days, which facilitate, direct, or encourage the use of infringing functionality; and

- publishing other advertising and/or marketing materials which facilitate, direct, or encourage the use of infringing functionality with knowledge thereof.

13.   Tesla has committed patent infringement in Delaware that has led to foreseeable harm and injury to Autonomous Devices.

14.   Venue is proper in this judicial district under 28 U.S.C. § 1400(b) as Tesla is incorporated in the State of Delaware.

BACKGROUND

A.   **Mr. Cosic Foresaw Issues Related To Autonomous Driving And Came Up With Concrete Solutions To Permit Functional And Safe Autonomous Vehicles.**

15.   The inventor and CEO of Autonomous Devices, Jasmin Cosic, is a named inventor on over 70 U.S. patents and applications. Mr. Cosic is also the CEO of AwareGen, a research and development company that focuses on inventing and patenting foundational breakthrough technologies in the areas of AI, video, and VR/AR/MR. Mr. Cosic has a two-decade-long track record of inventing successful technologies. AwareGen previously sold a significant technology portfolio to an industry consortium including Microsoft, IBM, Oracle, and SAP.

16.   Given Mr. Cosic's success in software, he continued to research and develop inventions relating to potentially helpful solutions for society. Such inventions include Mr. Cosic's concrete solutions for significant problems relating to autonomous driving—a topic of the Asserted Patents.

17.   Mr. Cosic realized, among other things, that the only way to achieve the functionality of autonomously driven cars was through the use of a learning system including a neural network and/or other learning techniques embedded in a vehicle with sensors, such as optical cameras or radar. Mr. Cosic further realized that the use of fleet learning, where each driver's actions within the fleet would be learned and correlated to the scene around the vehicle along with the vehicle's actions, would address these issues related to how autonomous vehicles addressed a given situation. An added benefit of this, is that as the fleet grew, and more and more scenes and actions were collected and learned, a knowledgebase would be created and it could be pushed to other vehicles so they could perform similar actions in response to similar scenes or circumstances.

18.   Mr. Cosic further realized that there were many highly unlikely scenarios that a human driver may face once or twice that an autonomous vehicle may encounter that would need to be accounted for in the learning system. For example, how should a vehicle react to a person running down the highway? So in addition to the fleet learning concepts discussed above, it would be necessary to simulate important but unlikely scenarios that could then be pushed to real-world cars. Furthermore, Mr. Cosic realized the crucial importance of autonomous driving simulations that would ensure the safety of the driving knowledge learned from the physical and simulated vehicles before the knowledgebase is released to all fleet vehicles and affects lives.

19.   As discussed below, the Asserted Patents do not claim autonomous driving in its totality. *See generally* Ex. G (Decl. of Dr. Saber). Rather, they are directed to concrete solutions to discrete issues facing autonomous devices, such as how to enable to autonomous device to operate similarly when confronted with a similar situation that other autonomous devices have faced in learning/training.

B.   **Tesla's Autonomous Driving And Partial Self-Driving Technology Development From 2014 To 2018.**

20.   The evolution of Tesla's self-driving technology and its CEO's, Mr. Elon Musk's, promises concerning self-driving capabilities are well documented.[2,3] To understand the current state of Tesla self-driving technology it is first helpful to understand the various driver assistance systems offered by Tesla—Tesla Autopilot, Tesla Enhanced Autopilot, and Tesla Full Self-Driving (FSD).

21.   Tesla Autopilot: Beginning in 2014, Tesla started equipping the Model S with hardware (HW1).[4] As shown below, the Autopilot software was initially released in October 2015 and allowed for lane keeping and lane changing.[5]

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[2] *See, e.g.*, Keith Barry, *Big Bets and Broken Promises: A Timeline of tesla's Self-Driving Aspirations*, Consumer Reports (Nov. 11, 2021), https://www.consumerreports.org/autonomous-driving/timeline-of-tesla-self-driving-aspirations-a9686689375/; Evan Nex, *The Ultimate Tesla Autopilot Guide: How Has It Evolved Over The Years?*, InsideEVs (Sep. 14, 2020), https://insideevs.com/news/443886/tesla-autopilot-evolution-history-ultimate-guide/; Cade Metz & Neal E. Boudette, *Inside Tesla as Elon Musk Pushed an Unflinching Vision for Self-Driving Cars*, The New York Times (Dec. 6, 2021), https://www.nytimes.com/ 2021/12/06/technology/teslaautopilot-elon-musk.html; Victor Tangermann, *Watch Elon Musk Promise Self-Driving Cars "Next Year" Every Year Since 2014*, Futurism (Jan. 19, 2022), https://futurism.com/video-elon-musk-promising-self-driving-cars.

[3] Notably, this story is also the subject of a recent FX and New York Times documentary called "The New York Times Presents | Elon Musk's Crash Course." The documentary can be viewed on Hulu.

[4] The Tesla Team, *Dual Motor Model S and Autopilot*, Tesla Blog (Oct. 10, 2014), https://web.archive.org/web/ 20191206043434/https://www.tesla.com/blog/dual-motor-model-s-and-autopilot.

[5] Gabe Nelson, *Tesla enables 'autopilot' for the Model S, promises a world without steering wheels*, Automotive News (Oct. 15, 2015), https://www.autoweek.com/news/a1878736/tesla-enables-autopilot-model-s-promises-world-without-steering-wheels/.

New Safety Features and Autopilot

The launch of Dual Motor Model S coincides with the introduction of a standard hardware package that will enable autopilot functionality. Every single Model S now rolling out of the factory includes a forward radar, 12 long range ultrasonic sensors positioned to sense 16 feet around the car in every direction at all speeds, a forward looking camera, and a high precision, digitally controlled electric assist braking system.

Building on this hardware with future software releases, we will deliver a range of active safety features, using digital control of motors, brakes, and steering to avoid collisions from the front, sides, or from leaving the road. (Please note this hardware is not available as a retrofit.)
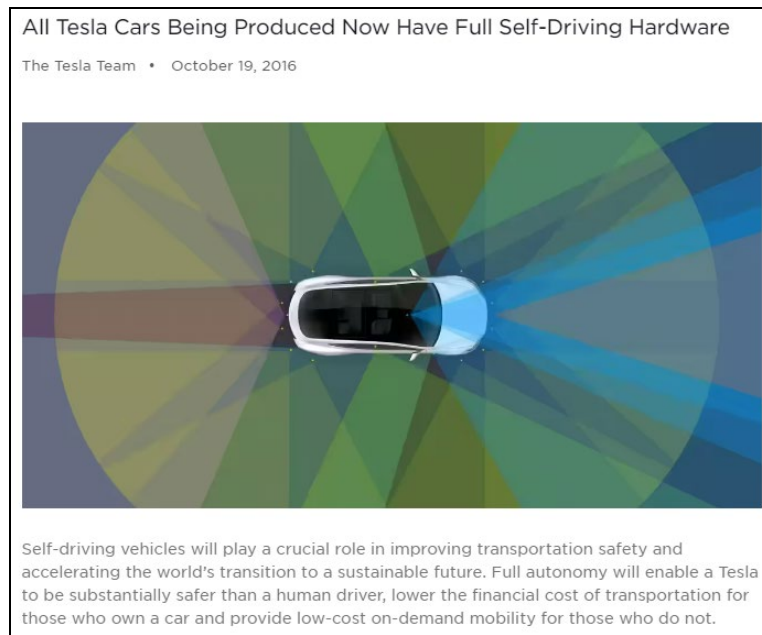
Model S will be able to steer to stay within a lane, change lanes with the simple tap of a turn signal, and manage speed by reading road signs and using active, traffic aware cruise control. It will take several months for all Autopilot features to be completed and uploaded to the cars.

22.   Upon information and belief, the original Tesla "Autopilot" technology essentially consisted of two previously known driver assistance technologies that rely on cameras, sonar, and radar.[6] The first is adaptive cruise control ("ACC") technology which uses radar to warn the driver if a vehicle ahead is slowing down and automatically brakes if the driver fails to take sufficient responsive action. The second driver-assistance technology on which the original Autopilot was based is lane keeping assistance ("LKA"). LKA evolved from lane departure warning ("LDW") technology that warns the driver if the vehicle crosses a painted line on the roadway, whereas LKA controls steering inputs to keep a vehicle in its lane. Neither of these early technologies, alone or in combination, could produce an autonomous self-driving car as these technologies—notably—consisted of pre-coded programming and were not able to learn from the driver and/or a fleet of similar vehicles.

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[6] Keith Barry, *Guide to Lane Departure Warning and Lane Keeping Assist*, Consumer Reports (June 28, 2017), www.consumerreports.org/car-safety/lane-departure-warning-lane-keeping-assist-guide-a7087080070/.

23.   Enhanced Autopilot: In October 2016, Tesla's Autopilot sensors and computing hardware transitioned to hardware version 2 (HW2).[7] HW2 comprised eight cameras, twelve ultrasonic sensors, and a forward-facing radar unit. Tesla's blog post announcement discussed the "crucial role" self-driving will play in our society as well as touting that "[f]ull autonomy will enable a Tesla to be substantially safer than a human driver, lower the financial cost of transportation for those who own a car and provide low-cost on-demand mobility for those who do not." *See, e.g.*, https://www.tesla.com/blog/all-tesla-cars-being-produced-now-have-full-self-driving-hardware.

All Tesla Cars Being Produced Now Have Full Self-Driving Hardware

The Tesla Team • October 19, 2016

Self-driving vehicles will play a crucial role in improving transportation safety and accelerating the world's transition to a sustainable future. Full autonomy will enable a Tesla to be substantially safer than a human driver, lower the financial cost of transportation for those who own a car and provide low-cost on-demand mobility for those who do not.

Id.

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[7] Chris Davies, *Tesla Enhanced Autopilot: What 8.1 is (and isn't) and 2016 will bring* , Slash Gear (Dec. 22, 2016), https://www.slashgear.com/tesla-enhanced-autopilot-what-8-1-is-and-isnt-and-2016-will-bring-22468524.

24.   By August 2017, Tesla announced hardware version 2.5 (HW2.5).[8] HW2.5 added some added computing and wiring redundancy compared to HW2, causing some at Tesla to refer to it as HW2.1. Upon information and belief, Tesla's infringement of the Autonomous Vehicle Patents did not begin until the release of Software Version 9.0, which was released around October 5, 2018.[9]

C.   Late 2018-Present: Tesla's Infringement Of The Asserted Patents With The Releases Of Software Version 9.0, Tesla Vision, Hardware Version 3, And The Dojo Supercomputer.

25.   Tesla began infringing the Asserted Patents in October 2018 with the release of Software Version 9.0. Software Version 9.0 included Navigate on Autopilot (software that enabled guiding the car from a highway's on-ramp to off-ramp)[10] and 360-degree visualization software for showing vehicles, bikes/motorcycles, light duty trucks and heavy-duty trucks.[11]

26.   In March 2019, Tesla transitioned to hardware version 3 (HW3).[12] In August 2020, Tesla announced that it was training its car computers in a simulation using the "Dojo"

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[8] Andrew J. Hawkins, *Tesla has been working on a backup plan in case its self-driving promises fail*, The Verge (Aug. 9, 2017), https://www.theverge.com/2017/8/9/16119746/tesla-self-driving-hardware-upgrade-hw-2-5.

[9] The Tesla Team, *Introducing Software Version 9.0*, Tesla Blog (October 5, 2018), https://www.tesla.com/blog/introducing-software-version-9.

[10] The Tesla Team, *Introducing Navigate on Autopilot*, Tesla Blog (Oct. 26, 2018), https://www.tesla.com/blog/introducing-navigate-autopilot.

[11] The Tesla Team, *Introducing Software Version 9.0*, Tesla Blog (October 5, 2018), https://www.tesla.com/blog/introducing-software-version-9.

[12] Tom Simonite, *Tesla's New Chip Holds the Key to 'Full Self-Driving,'* Wired (Apr. 24, 2019), https://www.wired.com/story/teslas-new-chip-holds-key-full-self-driving/.

neural net training super computer.[13] Upon information and belief, Tesla was using simulations to train its fleet and test its Software Version 9.0 in 2018.

27.   Despite the 2019 introduction, notably, Tesla "pre-sold" vehicles with "Enhanced Autopilot" and "FSD" capable hardware before these capabilities were released. As explained in one 2016 article, "all new Tesla's include the hardware required for the cars to drive autonomously. That ability is likely years away, but the company wants its current cars to be able to drive themselves when the software is ready in 5-10 years. The company is even including the hardware in all the cars free of charge — though if you want to actually *use* it, it'll cost you a good chunk of change: $8,000 if you pay for it up front, rising to as much as $10,000 if you decide to unlock it later. The new 'Enhanced Autopilot' — basically more advanced version of the current Autopilot system (*well, it will be eventually, once Tesla finishes testing it*) — is a $5,000 option on the Model X and the Model S at purchase, rising to $6,000 if you enable it after delivery.… Then there's 'Full Self-Driving Capability,' which will cost $3,000 at delivery or $4,000 later. It requires Enhanced Autopilot and will, according to Tesla, *eventually allow* the car to drive itself in all conditions."[14]

28.   In April 2019, shortly after HW3 was released and at Tesla's "Autonomy Day," Musk, announced that Tesla vehicles would be capable of full self-driving in dense urban areas like San Francisco and New York by the end of 2019.[15]

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[13] Mike Brown, *Telsa Dojo: Why Elon Musk Says Full Self-Driving Is Set for 'Quantum Leap'*, Inverse (Aug. 19, 2020), https://www.inverse.com/innovation/tesla-dojo-self-driving-vehicles.

[14] Jordan Golson, *Tesla's Self-Driving Care Hardware Will Run You $8,000*, The Verge (Oct. 20, 2016), https://www.theverge.com/2016/10/20/13346512/tesla-self-driving-autonomous-enhanced-autopilot-cost.

[15] Tesla, *Tesla Autonomy Day 2019*, YouTube (Apr. 22, 2019), www.youtube.com/watch?v=Ucp0TTmvqOE; Todd Lassa, *Tesla Promises Full Level 5*

29.   In October 2020, Tesla released a "beta" version of its FSD software in the United States.[16]

30.   In January 2021, just after Tesla's FSD beta was released, Tesla reported $721 million in profit in 2020, its first profitable year.[17] In a January 2021 earnings call that followed, Musk stated that "Tesla Autopilot is capable of full self-driving." Musk also stated, "I'm highly confident the car will drive itself for the reliability in excess of a human this year. This is a very big deal."[18]

31.   A year later, in January 2022, Musk stated on an earnings call, that "I think [Tesla is] completely confident at this point that [FSD] will be achieved. And my personal guess is that we'll achieve full self-driving this year, yeah, with data safety level significantly greater than the present. So it's — you know, the cars in the fleet essentially becoming self-driving by a software update, I think, might end up being the biggest increase in asset value of any asset class in history. We shall see."[19]

Autonomy by End of 2019, Model 3 Robotaxis by 2020, Motor Trend (Apr. 23, 2019), https://www.motortrend.com/news/tesla-autonomous-driving-level-5-model-3-robotaxi/.

[16] Alexander Stoklosa, *Tesla Puts 'Beta' Version of Full Self-Driving Capability in Hands of Select Few*, Motortrend News (Oct. 22, 2020), https://www.motortrend.com/news/tesla-full-self-driving-beta-capability-testing/.

[17] Neal Boudette, *Tesla Has First Profitable Year, but Competition Is Growing*, New York Times (Jan. 27, 2021), https://www.nytimes.com/2021/01/27/business/tesla-earnings.html.

[18] https://www.rev.com/blog/transcripts/tesla-inc-tsla-q4-2020-earnings-call.

[19] Motley Fool Transcribing, *Tesla (TSLA) Q4 2021 Earnings Call Transcript*, Motley Fool (Jan. 27, 2022), https://www.fool.com/earnings/call-transcripts/2022/01/27/tesla-tsla-q4-2021-earnings-call-transcript/.

32.   Shortly after Musk's January 2022 statements, Tesla announced that it was going to be removing the radar from future cars and would transition to an entire "Tesla Vision" camera based approach.[20]
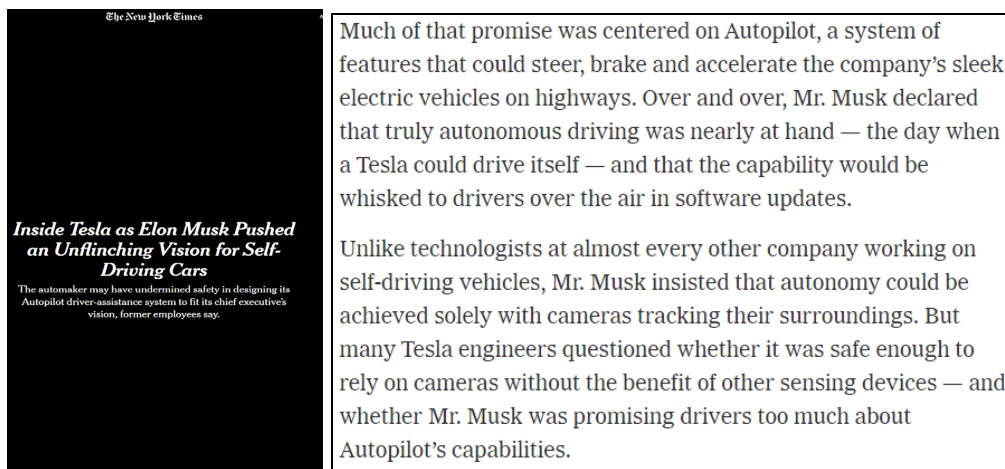
> ## Transitioning to Tesla Vision
>
> We are continuing the transition to Tesla Vision, our camera-based Autopilot system. Beginning with deliveries in May 2021, Model 3 and Model Y vehicles built for the North American market will no longer be equipped with radar. Instead, these will be the first Tesla vehicles to rely on camera vision and neural net processing to deliver Autopilot, Enhanced Autopilot, Full-Self Driving and certain active safety features. Customers who ordered before May 2021 and will receive a car with Tesla Vision will be notified of the change in their Tesla Account prior to delivery.

33.   On information and belief, Mr. Musk's continued assurances have caused engineers within Tesla to cut corners in an effort to accelerate the progress of Tesla's autonomous driving functionality. For instance, Tesla's continued promises that Tesla cars would soon be able to provide "Full Self-Driving" and Musk's repeated assurances "took the Tesla engineering team by surprise."[21]

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[20] Tesla, *Tesla Vision Update: Replacing Ultrasonic Sensors with Tesla Vision*, Tesla Support, https://www.tesla.com/support/transitioning-tesla-vision.

[21] Cade Metz & Neal E. Boudette, *Inside Tesla as Elon Musk Pushed an Unflinching Vision for Self-Driving Cars*, The New York Times (Dec. 6, 2021), https://www.nytimes.com/2021/12/06/technology/teslaautopilot-elon-musk.html.

The New York Times

Inside Tesla as Elon Musk Pushed an Unflinching Vision for Self-Driving Cars

The automaker may have undermined safety in designing its Autopilot driver-assistance system to fit its chief executive's vision, former employees say.

Much of that promise was centered on Autopilot, a system of features that could steer, brake and accelerate the company's sleek electric vehicles on highways. Over and over, Mr. Musk declared that truly autonomous driving was nearly at hand — the day when a Tesla could drive itself — and that the capability would be whisked to drivers over the air in software updates.

Unlike technologists at almost every other company working on self-driving vehicles, Mr. Musk insisted that autonomy could be achieved solely with cameras tracking their surroundings. But many Tesla engineers questioned whether it was safe enough to rely on cameras without the benefit of other sensing devices — and whether Mr. Musk was promising drivers too much about Autopilot's capabilities.

"Several key Tesla engineering managers working on its Autopilot . . . driving feature left the company after CEO Elon Musk told some employees he was unhappy with the progress in developing fully automated driving capabilities."[22] As noted after the recent departure of AI and Autopilot project head Andrej Karpathy, "[Karpathy's departure] adds to a long line of turnover atop the Autopilot group, which has struggled to realize Elon Musk's autonomous ambitions."[23]

34.   Tesla's infringement of Autonomous Device's patents not only saved Tesla time and money, but it has also helped to propel Tesla to the forefront of AI and autonomous driving solutions, a result that is of significant financial benefit to Tesla. Indeed, Mr. Musk has publicly stated that Tesla's autonomous driving technology will *not* be available through open source because of how valuable it is to Tesla and that Tesla will instead license its technology to other

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[22] Amir Efrati, *Frustrated Musk Shakes Up Autopilot Team*, The Information (July 9, 2019), https://www.theinformation.com/articles/frustrated-musk-shakes-up-autopilot-team.

[23] Mark Gurman and Ed Ludlow, *Tesla Autopilot chief to depart, adding to upheaval in executive ranks*, Driving (July 16, 2022), https://driving.ca/auto-news/industry/tesla-autopilot-chief-to-depart-adding-to-upheaval-in-executive-ranks.

automakers.[24] Tesla's refusal to apply an open source philosophy to its autonomous driving technology demonstrates the high value of the technology and contradicts the "Open Source Revolution" intended to "accelerate the advent of sustainable transport" announced by Mr. Musk in 2014.[25]

35.   Upon information and belief, Tesla's infringement of the Autonomous Vehicle Object Representation and Digital Picture Patents began with Software Version 9.0 and beyond running on the Model S, 3, X, and Y alone or in combination with the Dojo supercomputer.

36.   Upon information and belief, Tesla's infringement of the Autonomous Vehicle Simulation Patents began with Tesla's use of the Dojo supercomputer.

THE ASSERTED PATENTS

37.   The following section describes the background of the Asserted Patents and why they are each directed to specific improvements in autonomous driving and AI as well as containing at least one or more inventive concepts. The description of each patent is supported by the declaration of Dr. Saber attached hereto as Exhibit G and incorporated herein by reference.

38.   Today, for the first time in 130 years, we are in the midst of a major transformation in automobile transportation. In contrast to the personally owned, gasoline-powered, human-driven vehicles that have dominated the last century, we are transitioning to mobility services based on electric-powered and driverless vehicles. As such, companies, such as

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[24] Tesla, *Tesla AI Day 2021*, YouTube (Aug. 19, 2021), https://www.youtube.com/watch?v=j0z4FweCy4M at 2:13:40.

[25] Matthew Rimmer, *Tesla Motors' Open Source Revolution: Intellectual Property and the Carbon Crisis*, Medium (Jun. 15, 2014), https://drrimmer.medium.com/tesla-motors-open-source-revolution-intellectual-property-and-the-carbon-crisis-95259ff867e6.

Tesla, have spent an enormous sum of money in the pursuit of autonomous driving with the goal

being full-self driving (where a vehicle drives itself without the need for human intervention) and

have adopted a solution that infringes Autonomous Devices' Patents.

A.   **The Object Representation Patents (U.S. Patent Nos. 10,452,974 & 11,238,344) Are Directed To Concrete Solutions Addressing How A Fleet Of Autonomous Vehicles Detect And Handle Different Driving Conditions Based On Captured Objects. [26]**

39.   On October 22, 2019, the U.S. Patent and Trademark Office duly and legally

issued the '974 Patent, entitled "Artificially intelligent systems, devices, and methods for

learning and/or using a device's circumstances for autonomous device operation" to inventor

Jasmin Cosic. Autonomous Devices owns all rights to the '974 Patent necessary to bring this

action. A true and correct copy of the '974 Patent is attached hereto as Exhibit A and

incorporated herein by reference.

40.   On February 2, 2022, the U.S. Patent and Trademark Office duly and legally

issued the '344 Patent, entitled "Artificially intelligent systems, devices, and methods for

learning and/or using a device's circumstances for autonomous device operation" to inventor

Jasmin Cosic. Autonomous Devices owns all rights to the '344 Patent necessary to bring this

action. A true and correct copy of the '344 Patent is attached hereto as Exhibit B and

incorporated herein by reference.

41.   Prior to the innovations in the '974 and '344 Patents (herein the "Object

Representation Patents"), "[d]evices or systems commonly operate[d] by receiving a user's

operating directions in various circumstances. Instructions [were] then executed to effect the

operation of a device or system based on [the] user's operating directions. Hence, devices or

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[26] The terms "object representation" or "representation of objects" are used interchangeably and mean the same thing as the Asserted Patents use of "circumstance representation."

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systems rel[ied] on the user to direct their behaviors. Commonly employed device or system operating techniques lack[ed] a way to learn [the] operation of a device or system and enable autonomous operation of a device or system." Ex. B ('344 Patent) at 1:39-47; *see also* Ex. G (Decl. of Dr. Saber) at ¶¶ 28-31.

42.   In the prior art, there were also methods for performing assisted driving. *See* Ex. G at ¶¶33-34. For example, there were lane-keeping assist systems that detected lane markers (white/yellow) on the road and assisted the driver in keeping the vehicle between lane markers. *Id.* There were also intelligent cruise control systems that measured the distance from the vehicle ahead and controlled the acceleration and deceleration to automatically maintain a suitable following distance. *Id.* Part of the difficulty was that prior art driver assistance aids were pre-coded into the system, e.g., keep a certain distance from the lead vehicle, maintain the vehicle between the lines on the road, etc. *Id.* Pre-coding responses to objects was not sufficiently precise to enable autonomous device operation across the vast array of conditions a vehicle may come across on a daily basis. *Id.*

43.   As discussed above, known "techniques lack[ed] a way to ***learn*** [the] operation of a device or system and enable autonomous operation of a device or system." '974 Patent at 1:26-35. Indeed, the "[p]rior art discloses a system that explores its own environment on its own" without any learning from a user's instructions. Ex. H ('974 Patent NOA) at 14; *see also* Ex. O ('344 Patent NOA) at 12 (reciting similar reasons). And the "[p]rior art does not disclose the first and the second correlations that each include a circumstance representation correlated with instruction sets." Ex. H ('974 Patent NOA) at 14; *see also* Ex. O ('344 Patent NOA) at 12 (reciting similar reasons).

44.   The Object Representation Patents are generally directed to systems, methods and computer readable mediums that store a knowledgebase that correlates device operating instruction sets with objects encountered by a device, obtain new objects representation using device sensors, match the new objects with objects in the knowledgebase, and cause a device that detected the new objects to autonomously execute an instruction set correlated to the matched objects. The autonomously performed operation is based on a correlation learned in a learning process that includes operating a device at least partially by a user.

45.   For example, if a second autonomous vehicle detects a object representation (e.g., objects such as vehicles or people in the road) and the knowledgebase has a similar circumstance representation that matches with the detected objects, then the second autonomous vehicle performs an instruction set (e.g., braking) at least partially learned by operating a first autonomous vehicle. *See* Ex. G (Decl. of Dr. Saber) at ¶ 39.

46.   Referring to Figure 38 and the specification description of Figure 38, for example, vehicle 98 includes sensors 92, such as a camera 92 that detect objects 615aa-ad (people, boulders, materials, vehicles, etc.) in the vehicle's 98a's surrounding in the form of a circumstance representation (i.e. one or more object representations).[27] Ex. B ('344 Patent)[28] at 162:48-163:16; Fig. 38. If a vehicle's computer(s) detect a match with a previously learned circumstance representation 525 (e.g., one or more detected objects), the vehicle 98 performs autonomous operation using previously learned instructions 526 correlated with the previously learned circumstance representations. Ex. B ('344 Patent) at 163:36-164:5. The corresponding

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[27] Figure citations include the specification discussion of each figure.

[28] The Object Representation Patents share a specification. For simplicity, all citations are to the '344 Patent.

claimed features were not well-understood, routine or conventional as of the priority date of the Object Representation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶39-44.

FIG. 38
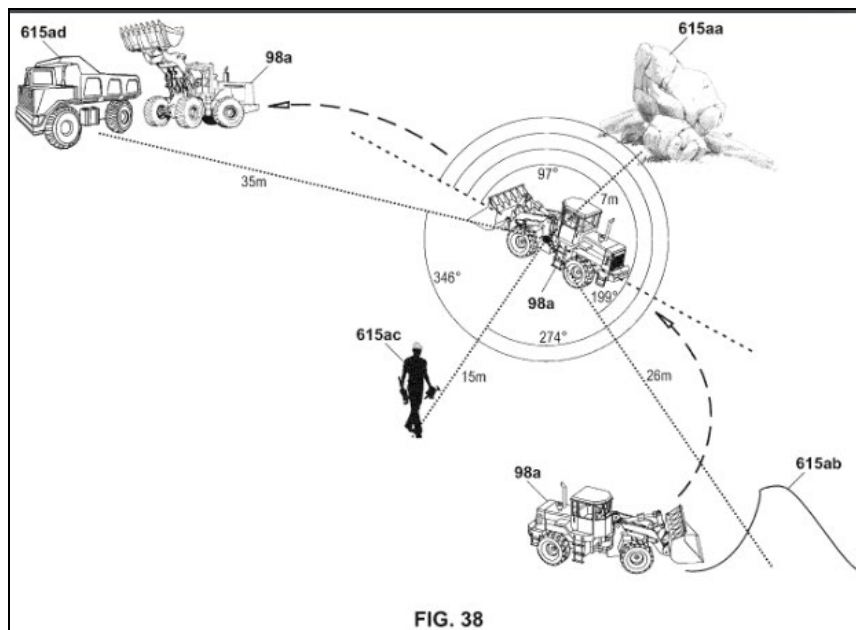
47.   The memory of the device performing the autonomous operation stores a knowledgebase that correlates instructions for performing the operation with the stored circumstance representation.   When there is at least a partial match between the stored circumstance representation and the current circumstance representation, the operation is autonomously performed by the device that matched the current and stored circumstance representations. *Id*.   The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Object Representation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 39-44.

48.   With the innovations in the Object Representation Patents, autonomous device operation using a knowledgebase (e.g., a system including a neural network and previously learned circumstance representations (e.g., one or more object representations) correlated with

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instructions) that is trained by a fleet of vehicles became possible. *See, e.g.*, Ex. B ('344 Patent) at 164:6-28; *see also id.* at 15:36-45; 38:54-40:34; 82:6-14; 95:15-96:25; 103:35-105:22; 108:40-44; *see* Ex. G (Decl. of Dr. Saber) at ¶43-44. The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Object Representation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶43-44.

49. Thus, by utilizing the autonomous device operating techniques disclosed in the Object Representation Patents, a vehicle can perform autonomous operations based on previously learned circumstances and instructions. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 39-45. For at least the above-mentioned reasons, the claimed inventions improve the capabilities of autonomous devices that employ the systems and methods disclosed in the Object Representation Patents. *Id.* Further, the methods claimed in the Object Representation Patents cannot be performed as mental steps by a human, nor do they represent the application of a generic computer to any well-known method of organizing human behavior. *Id.*

50. The claims of the Object Representation Patents are directed to patent-eligible, non-abstract ideas in that they provide technical solutions to at least the technical problems described above. For instance, claim 1 of each Object Representation Patent and claim 18 of the '974 Patent, as a whole, is inventive and novel, as are at least the herein identified claim limitations. *See, e.g.*, Ex. A ('974 Patent) at claim 1 ("a learning process that includes operating the first device at least partially by a user" and "the second device autonomously performs one or more operations defined by the first one or more instruction sets for operating the first device learned in the learning process"), claim 18 ("a learning process that includes operating the first device at least partially by a user" and "causing … the second device to perform one or more operations defined by the first one or more instruction sets for operating the first device learned

in the learning process at least by causing the one or more processor circuits or another one or more processor circuits to execute the first one or more instruction sets for operating the first device learned in the learning process"); Ex. B ('344 Patent) at claim 1 ("a learning process that includes operating the first device at least partially by a user" and "the second device autonomously performs one or more operations defined by the first one or more instruction sets for operating the first device"). Moreover, claim 3 of the '344 Patent and claim 14 of the '974 Patent, as a whole, are inventive and novel, as are at least the herein identified claim limitations. *See, e.g.*, Ex. A ('974 Patent) at claim 14 (" wherein the first circumstance representation includes: one or more object representations, or one or more collections of object representations, and wherein the second circumstance representation includes: one or more object representations, or one or more collections of object representations, and wherein the third circumstance representation includes: one or more object representations, or one or more collections of object representations."); Ex. B ('344 Patent) at claim 3 ("wherein the first circumstance representation includes a first one or more object representations, and wherein the second circumstance representation includes a second one or more object representations"). As of the priority date of the '974 and '344 Patents, the concept of causing a device to perform autonomous operation based on (i) representations of that device's circumstances (which may include one or more object representations) and (ii) representations of circumstances (which may include one or more object representations) and instructions learned from that device or another device was not well-understood, routine, or conventional. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 45-46. This is a vast improvement over the prior art discussed herein. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 39-48.

51.   The claimed features unlocked the next level of autonomous driving. *Id.* By allowing the entire fleet to train the system, much more precise and appropriate reactions to driving conditions became possible. *Id*. This is so because the massive number of scenarios encountered by the fleet could be distilled into a set of circumstances (which may include one or more objects) and corresponding instructions that can be efficiently performed autonomously. *Id*.

52.   The claims of the Object Representation Patents recite one or more inventive concepts rooted in computerized technology that overcome technical problems in that field. *Id*. at ¶¶ 44-48. A person of ordinary skill in the art reading the Object Representation Patents and their claims would understand that the Object Representation Patents' disclosures and claims are drawn to solving specific technical problems arising in artificially intelligent and autonomous devices and systems. *Id.* Accordingly, each claim of the Object Representation Patents recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent claiming an abstract concept. *Id.* Further, the claimed improvements over the prior art are concrete and improve the capabilities of existing autonomous and AI systems. *Id*.

53.   A person of ordinary skill in the art reviewing the specification of the Object Representation Patents would understand that the inventor had possession of the claimed subject matter and would know how to practice the claimed invention without undue experimentation. *See id*. at ¶ 49.

B.   **The Digital Picture Patents (U.S. Patent Nos. 10,102,449 & 11,055,583) Are Directed To Concrete Solutions Addressing How A Fleet Of Autonomous Vehicles Detect And Handle Different Driving Conditions Based On Digital Pictures Captured By The Vehicle And Correlated To Learned Driving Instructions.**

54.   On October 16, 2018, the U.S. Patent and Trademark Office duly and legally issued the '449 Patent, entitled "Devices, systems, and methods for use in automation" to inventor Jasmin Cosic. Autonomous Devices owns all rights to the '449 Patent necessary to bring this action. A true and correct copy of the '449 Patent is attached hereto as Exhibit F and incorporated herein by reference.

55.   On July 6, 2021, the U.S. Patent and Trademark Office duly and legally issued the '583 Patent, entitled "Machine learning for computing enabled systems and/or devices" to inventor Jasmin Cosic. Autonomous Devices owns all rights to the '583 Patent necessary to bring this action. A true and correct copy of the '583 Patent is attached hereto as Exhibit E and incorporated herein by reference.

56.   Prior to the innovations in the '449 and '583 Patents (herein the "Digital Picture Patents"),"devices or systems [were] limited to relying on the user to direct them." Ex. F ('449 Patent) at 1:20-23; *see also* Ex. E ('583 Patent) at 1:31-39 ("These systems and/or devices depend on user's input to various degrees for their operation. A machine learning solution [was] needed for computing enabled systems and/or devices to be less dependent on or fully independent from user input."); *see* Ex. G (Decl. of Dr. Saber) at ¶¶ 30, 32.

57.   As previously discussed, there were prior art methods for performing assisted driving, including lane-keeping assist systems and intelligent cruise control systems. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 33-36. But those prior art systems had disadvantages including the inability to respond to the vast array of objects a vehicle may come across on a daily basis. *Id.* In allowing the '583 Patent, for example, the examiner explained that the prior art fails to

disclose learning the correlation between an image and an instruction set. Ex. P ('583 Patent

NOA) at 13.

58.   The '583 Patent is generally directed to systems, methods, and non-transitory

machine-readable mediums for correlating an instruction set for operating a first device with

digital pictures, obtaining a new digital picture, and in response to matching the new digital

picture with a correlated digital picture causing the device that obtained the new digital picture to

perform operations defined by the instruction set correlated to the matched digital picture. The

instruction set for operating the first device may be executed by a second device in response to

the second device matching the new picture with the picture correlated to the instruction sets.

59.   The '449 Patent is generally directed to systems, methods and non-transitory

computer readable mediums that correlate an instruction set for operating a first device with a

digital picture, provide an artificial intelligence (AI) unit that (i) receives a new digital picture,

(ii) matches the new digital picture with the digital picture correlated to the instruction set, and

(iii) causes a device that received the new digital picture to execute the instruction set correlated

to the matched digital picture. *See* Ex. G (Decl. of Dr. Saber) at ¶¶50-51.

60.   For example, if a second vehicle receives a new digital picture of people and/or

vehicles in the road and the knowledgebase has a similar digital picture that matches with the

new digital picture, then the second vehicle autonomously performs an instruction set (e.g.,

braking) at least partially learned by operating a first vehicle. *See* Ex. G (Decl. of Dr. Saber) at

¶¶ 52-53.

61.   Referring to Figure 38 of the '449 Patent, for example, the vehicle 98a includes

sensors 90, such as a camera 90a that detect the vehicle's surroundings in the form of a digital

picture. Ex. F ('449 Patent) at 152:21-154-27, Figs. 37, 38; *see also* Ex. E ('583 Patent) at

152:33-154:39, Figs. 37-38. If the vehicle's computer(s) detect a match with a previously learned digital picture 525, the vehicle 98 performs autonomous operation using previously learned instructions 526 correlated with the previously learned digital picture. *See, e.g.*, Ex. F at 154:5-27; *see also* Ex. E ('583 Patent) at 154:14-24.   The memory correlates instructions for performing an operation with the stored digital picture and when there is a match or partial match with the digital picture the operation is autonomously performed. Ex. F at 154:5-27; *see also* Ex. E ('583 Patent) at 154:14-24.   The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Digital Picture Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 50-55.

62.   The memory of the device performing the autonomous operation stores a correlation between instructions for performing an operation and a digital picture.   When there is at least a partial match between the stored digital picture and a new digital picture, the operation is autonomously performed by the device that matched the new and stored digital pictures. *Id*. at 54. The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Digital Picture Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶ 50-55.

63.   With the innovations in the Digital Picture Patents, autonomous device operation using a memory with instruction and picture correlations (e.g., a system including a neural network and previously learned digital pictures correlated with instructions) that is trained by a fleet of vehicles became possible. *See, e.g.*, Ex. F ('449 Patent) at 14:38-45 ("The fully autonomous device operating may include executing the one or more instruction sets for operating the device correlated with the first digital picture without a user confirmation."); *see also id*. at Figs. 31-35; Ex. E ('583 Patent) at 14:54-62, Figs. 31-35; *see* Ex. G (Decl. of Dr. Saber) at ¶ 55. The corresponding claimed features were not well-understood, routine or

conventional as of the priority date of the Digital Picture Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 50-55.

64.   Thus, by utilizing the autonomous device operating techniques disclosed in the Digital Picture Patents, a vehicle can perform autonomous operations based on previously learned pictures and instructions. For at least the above-mentioned reasons, the claimed inventions improve the capabilities of autonomous devices that employ the systems and methods disclosed in the Digital Picture Patents. Further, the methods claimed in the Digital Picture Patents cannot be performed as mental steps by a human, nor do they represent the application of a generic computer to any well-known method of organizing human behavior. *See* Ex. G (Decl. of Dr. Saber) at ¶ 56.

65.   The claims of the Digital Picture Patents are directed to patent-eligible, non-abstract ideas in that they provide technical solutions to at least the technical problems described above. The claims relate to identifying similarities in images detected by a vehicle's sensors that are similar to previously learned digital images that when match, cause the vehicle to execute previously learned instructions corresponding to the similar image. For instance, claims 1 and 17 of the '449 Patent and claims 1 and 4 of the '583 Patent, as a whole, are inventive and novel, as are at least the herein identified claim limitations. *See, e.g.*, Ex. F ('449 Patent) at claim 1 ("a learning process that includes operating the first physical device at least partially by a user" and "a second physical device autonomously performs one or more operations defined by the first one or more instruction sets for operating the first physical device"), claim 17 ("a learning process that includes operating the first physical device at least partially by a user" and "autonomously performing…by a second physical device, one or more operations defined by the first one or more instructions sets…."); Ex. E ('583 Patent) at claims 1, 4 ("receiving or

generating a first one or more instruction sets for operating the first device" and "causing … a second device to perform one or more operations defined by the first one or more instruction sets for operating the first device.") As of the priority dates of the Digital Picture Patents, the concept of causing a device to perform autonomous operation based on (i) digital pictures captured by a device and (ii) digital pictures and instructions learned from that device or another device was not well-understood, routine, or conventional. *See* Ex. G (Decl. of Dr. Saber) at ¶¶ 55-56. This is a vast improvement over the prior art discussed herein. *Id.*

66.   The claimed features unlocked the next level of autonomous driving. Ex. G (Decl. of Dr. Saber) at ¶ 57. By allowing the entire fleet to train the system, much more precise and appropriate reactions to driving conditions became possible. *Id*. This is so because the massive number of scenarios encountered by the fleet could be distilled into a set of digital pictures and corresponding instructions that can be efficiently performed autonomously. *Id*.

67.   The claims of the Digital Picture Patents recite one or more inventive concepts rooted in computerized technology that overcome technical problems in that field. *Id*. at ¶ 58. A person of ordinary skill in the art reading the Digital Picture Patents and their claims would understand that the Digital Picture Patents' disclosures and claims are drawn to solving specific technical problems arising in artificially intelligent and autonomous devices and systems. Accordingly, each claim of the Digital Picture Patents recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent claiming an abstract concept. *Id.* Further, the claimed improvements over the prior art are concrete and improve the capabilities of existing autonomous and AI systems. *Id.* at ¶¶ at 55-58.

68.   A person of ordinary skill in the art reviewing the specification of the Digital Picture Patents would understand that the inventor had possession of the claimed subject matter

and would know how to practice the claimed invention without undue experimentation. *See id*. at ¶ 59.

C.   **The Autonomous Vehicle Simulation Patents (U.S. Patent Nos. 10,607,134 & 11,113,585) Are Directed To Concrete Solutions Addressing How An Avatar–Such As A Simulated Vehicle—Can Be Taught How To Safely Handle Driving Situations Via Pictures Or Object Representations In A Simulation.**

69.   On March 31, 2020, the U.S. Patent and Trademark Office duly and legally issued the '134 Patent, entitled "Artificially intelligent systems, devices, and methods for learning and/or using an avatar's circumstances for autonomous avatar operation" to inventor Jasmin Cosic. Autonomous Devices owns all rights to the '134 Patent necessary to bring this action. A true and correct copy of the '134 Patent is attached hereto as Exhibit C and incorporated herein by reference.

70.   On September 7, 2021, the U.S. Patent and Trademark Office duly and legally issued the '585 Patent, entitled "Artificially intelligent systems, devices, and methods for learning and/or using visual surrounding for autonomous object operation" to inventor Jasmin Cosic. Autonomous Devices owns all rights to the '585 Patent necessary to bring this action. A true and correct copy of the '585 Patent is attached hereto as Exhibit D and incorporated herein by reference.

71.   Both the '134 and '585 Patents (herein the "Autonomous Vehicle Simulation Patents") are directed to advances in AI, autonomous driving, and simulation technology. For example, as discussed in the specification of the '134 Patent: "Applications and/or avatars thereof commonly operate by receiving a user's operating directions in various circumstances. Instructions are then executed to effect the operation of an application and/or avatar based on user's operating directions. Hence, applications and/or avatars rely on the user to direct their

behaviors." Ex. C ('134 Patent) at 1:26-35; Ex. D ('585 Patent) at 1:45-55; *see* Ex. G (Decl. of Dr. Saber) at ¶¶60-65. However, the prior "[c]ommonly employed application and/or avatar operating techniques lack a way to learn operation of an application and/or avatar and enable autonomous operation of an application and/or avatar." Ex. C ('134 Patent) at 1:26-35; Ex. D ('585 Patent) at 1:45-55; *see* Ex. G (Decl. of Dr. Saber) at ¶61.   According to the patent examiner, there were references that discussed semi-autonomous operation of avatars in games, relieving users of some of the tasks needed to operate the avatar, but those references contained little description of how the avatar performed its autonomous operations. Ex. Q ('134 Patent NOA) at 16.

72.   The Autonomous Vehicle Simulation Patents are directed to systems, methods and computer readable mediums that allow an avatar or object (i.e., a simulated car) in a program (i.e., an autonomous vehicle simulation) to autonomously perform operations in response to an acquired image or object representations at least partially matching an image or object representations stored in a memory. *See* Ex. G (Decl. of Dr. Saber) at ¶ 62.

73.   Specifically, the '134 Patent is generally directed to innovations including correlating object representations with instruction sets for operating a first avatar of an application, obtaining a second one or more object representations, looking for a match between the second object representations and the first object representations, and in response to finding a match causing a second avatar of the application to perform operations defined by the instruction set corresponding to the matched object representation. For example, if a second avatar detects object representations (e.g., objects such as simulated vehicles or simulated people in the road) and the system has similar object representations that match with the detected objects, then the second avatar performs an instruction set (e.g., braking). *See* Ex. G (Decl. of Dr. Saber) at ¶ 63.

The '585 Patent is generally directed to innovations including correlating digital pictures with instruction sets for operating a first object of an application, obtaining a second one or more digital pictures, looking for a match between the second digital pictures and the first digital pictures, and in response to finding a match causing a second object of the application to perform operations defined by the instruction set corresponding to the matched digital picture. *Id.* at ¶ 64. For example, if a second object (i.e. simulated autonomous vehicle) captures (i.e. by rendering the simulated surrounding) a digital picture (e.g., picture of simulated vehicles or simulated people in the road) and the system has a similar digital picture that matches with the captured picture, then the second object performs an instruction set (e.g., braking). *Id.*

74.   Referring to Figure 35 of the '585 Patent, for example, object 180 b (e.g., a simulated autonomous vehicle) captures (i.e. by rendering its simulated surrounding) digital pictures 525 of the objects surrounding in a 3D virtual world 18 b. Ex. D ('585 Patent) at 166:38-167:67; Fig. 35; *see also* Ex. C ('134 Patent) at 163:52-166:46; Fig. 36. If the system detects a match with a previously learned digital picture 525, the object 180 b performs autonomous operation using previously learned instructions 526 correlated with the previously learned digital picture. Ex. D ('585 Patent) at 166:38-167:67; Fig. 35; *see also* Ex. C ('134 Patent) at 163:52-166:46; Fig. 36. The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Autonomous Vehicle Simulation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶60-72.
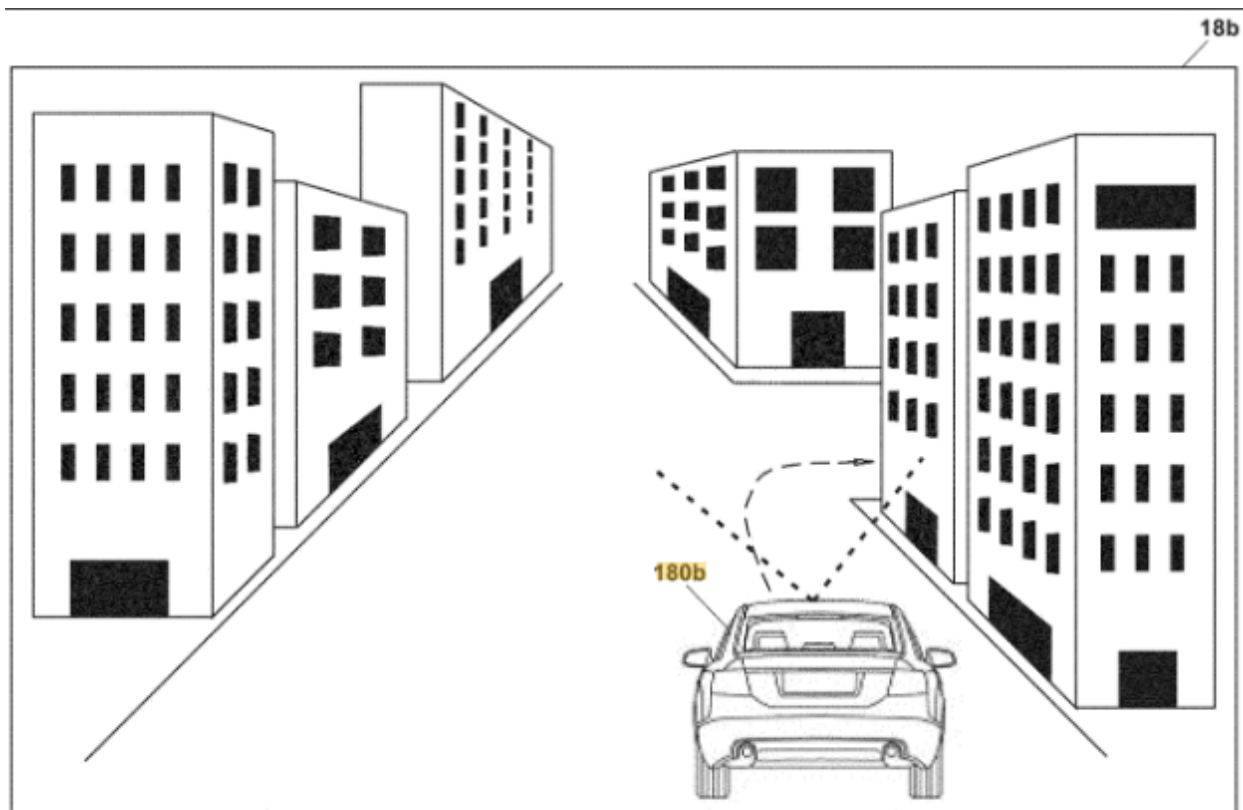
FIG. 35

75.   The system with the object/avatar performing the autonomous operation stores correlation between instructions for performing the operation with the stored digital pictures representation. When there is at least a partial match between the stored digital picture and the current digital picture, the operation is autonomously performed on an object and/or avatar that captured the current digital pictures that were matched to the stored digital pictures. The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Autonomous Vehicle Simulation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶60-72.

76.   Similarly, the system with the object/avatar performing the autonomous operation stores correlation between instructions for performing the operation with the stored object representations. When there is at least a partial match between the stored object representations

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and the current object representations, the operation is autonomously performed on an object and/or avatar that captured the current object representations that were matched to the stored object representations. The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Autonomous Vehicle Simulation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶60-72.

77.   With the innovations in the Autonomous Vehicle Simulation Patents, simulated autonomous device operation using a knowledgebase (e.g., a system including a neural network and previously learned object representations correlated with instructions) became possible. *See, e.g.*, Ex. C ('134 Patent) at 103:8-104:64; Ex. D ('585 Patent) at 105:19-107:4; Ex. G (Decl. of Dr. Saber) at ¶ 68. The corresponding claimed features were not well-understood, routine or conventional as of the priority date of the Object Representation Patents. *See* Ex. G (Decl. of Dr. Saber) at ¶¶60-72.

78.   Thus, by utilizing the simulated autonomous device operating techniques disclosed in the Autonomous Vehicle Simulation Patents, an object/avatar, such as a simulated vehicle, can perform autonomous operations based on previously learned object representations/pictures and instructions. For at least the above-mentioned reasons, the claimed inventions improve the capabilities of simulated autonomous devices that employ the systems and methods disclosed in the Autonomous Vehicle Simulation Patents. Further, the methods claimed in the Autonomous Vehicle Simulation Patents cannot be performed as mental steps by a human, nor do they represent the application of a generic computer to any well-known method of organizing human behavior.

79.   The claims of the Autonomous Vehicle Simulation Patents are directed to patent-eligible, non-abstract ideas in that they provide technical solutions to at least the technical

problems described above. For instance, claim 1 of each Autonomous Vehicle Simulation Patents, as a whole, is inventive and novel, as are at least the herein identified claim limitations. *See, e.g.*, Ex. C ('134 Patent) at claim 1 ("accessing a first correlation including a first one or more object representations correlated with a first one or more instruction sets for operating a first avatar of an application" and "causing … a second avatar of the application to perform one or more operations defined by the first one or more instruction sets for operating the first avatar of the application at least by executing the first one or more instruction sets for operating the first avatar of the application."); Ex. D ('585 Patent) at claim 1 ("one or more memories that store at least a first one or more digital pictures correlated with a first one or more instruction sets for operating a first object of a first application program" and "executing the first one or more instruction sets" such that the "the second object of the first application program, or the first object of the second application program autonomously performs one or more operations defined by the first one or more instruction sets for operating the first object of the first application program."). As of the priority dates of the Autonomous Vehicle Simulation Patents, the concept of causing a simulated device to perform autonomous operation based on (i) pictures/representations of objects in the device's simulated surrounding and (ii) previously learned pictures/object representations and instructions was not well-understood, routine, or conventional. *See* Ex. G (Decl. of Dr. Saber) at ¶¶60-72. This is a vast improvement over the prior art discussed herein. *Id.* at ¶69.

80. The claimed features unlocked the next level of autonomous driving. Ex. G (Decl. of Dr. Saber) at ¶ 70. While fleet learning from the real-world pictures and object representations can work, there were still inhibiting limitations such as scale and uniqueness. *Id*. Regarding scale, the fleet is limited in its learning ability by the number of autonomous vehicles

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on the road that are conveying data back into the system. *Id.* Similarly, regarding uniqueness, the fleet is limited in what in can learn to what the monitored autonomous vehicles experience. The Autonomous Vehicle Simulation Patents address these issues by taking the concrete ideas found in the Object Representation and Digital Picture Representation Patents and move them into a simulation. *Id.* As discussed in the prosecution of both Autonomous Vehicle Simulation Patents, this was a completely novel idea as the prior art does not teach the details of object representations, avatars, determining instruction sets, and causing an avatar to perform operations as recited in the claims. *Id.*; *see also id.* at ¶ 61. By allowing the entire fleet to train the system, as discussed earlier, and allowing simulation of driving operations and situations, much more precise and appropriate autonomous driving became possible. *Id*. at ¶70. Thus, these simulations are crucial for safety before software it is released to physical vehicles because they allow for enormous testing and data collection, without the need to put anyone at risk. This promotes not only safer testing but safer software that is released to the vehicles.

81.   The claims of the Autonomous Vehicle Simulation Patents recite one or more inventive concepts rooted in computerized technology that overcome technical problems in that field. *Id*. at ¶71.   A person of ordinary skill in the art reading the Autonomous Vehicle Simulation Patents and their claims would understand that the Autonomous Vehicle Simulation Patents' disclosures and claims are drawn to solving specific technical problems arising in simulating artificially intelligent and autonomous devices and systems. *Id.* Accordingly, each claim of the Autonomous Vehicle Simulation Patents recites a combination of elements sufficient to ensure that the claim in practice amounts to significantly more than a patent claiming an abstract concept. *Id*. Further, the claimed improvements over the prior art are concrete and improve the capabilities of existing autonomous and AI systems. *Id*.

82.   A person of ordinary skill in the art reviewing the specification of the
Autonomous Vehicle Simulation Patents would understand that the inventors had possession of
the claimed subject matter and would know how to practice the claimed invention without undue
experimentation. *Id.* at ¶72

THE ACCUSED PRODUCTS

83.   The Autonomous Vehicle Patents are infringed by Tesla Fleet Vehicles, which
includes at least Models S, 3, X, and Y, having software Version 9.0 and beyond.[29] These
vehicles come equipped with "advanced hardware capable of providing Autopilot features, and
full self-driving capabilities—through software updates designed to improve functionality over
time."
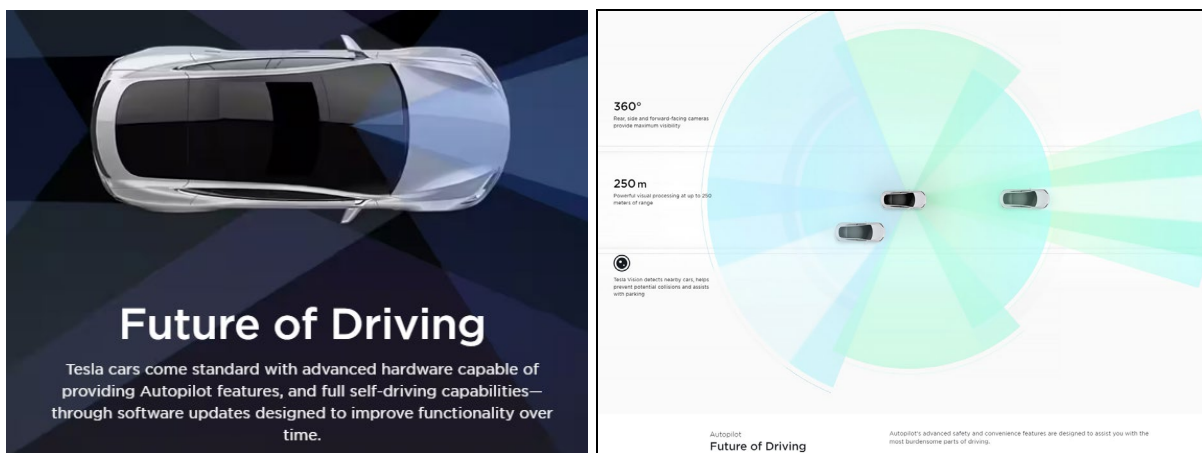
Sources: Tesla, *Autopilot*, https://www.tesla.com/autopilot (last visited November 3, 2022);
Tesla, *Model Y*, https://www.tesla.com/modely (last visited November 3, 2022).

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[29] *See, e.g.*, Tesla, *Model S*, https://www.tesla.com/models, (last visited November 3, 2022);
Tesla, *Model 3*, https://www.tesla.com/model3 (last visited November 3, 2022); Tesla, *Model X*,
https://www.tesla.com/modelx (last visited November 3, 2022); Tesla, *Model Y*,
https://www.tesla.com/modely (last visited November 3, 2022).

84.   The Autonomous Vehicle Simulation Patents are infringed by Tesla's AI training computer called "Dojo." The Dojo computers allow Tesla to train the AI used in Tesla Fleet Vehicles using circumstance representations/pictures from the real world as well as simulations.

Source: *See* Tesla, *Tesla AI Day*, YouTube (Aug. 19, 2021), https://www.youtube.com/watch?v= j0z4FweCy4M&t=3s.

Id.

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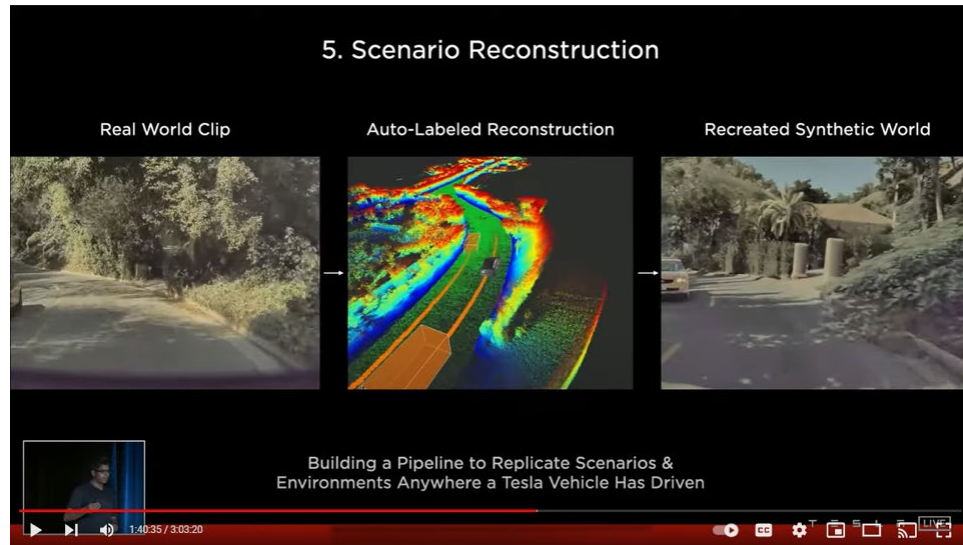
85.   As discussed by Tesla CEO Elon Musk, "[Dojo] a super powerful training computer. The goal of Dojo will be to be able to take in vast amounts of data and train at a video level and do unsupervised massive training of vast amounts of video with the Dojo program – or Dojo computer."[30] That data is fed by the Tesla Fleet Vehicles, which are all equipped with cameras and sensors that send data to the Dojo supercomputer.

GENERAL ALLEGATIONS RELATED TO INFRINGEMENT

86.   Tesla has infringed and continues to directly and indirectly infringe at least one claim of each of the Asserted Patents by engaging in acts constituting infringement under 35 U.S.C. § 271(a), (b), and/or (c), including but not limited to one or more of making, using, selling, offering for sale, importing, exporting, and inducing and contributing to infringement by others, the Accused Products in this District and elsewhere in the United States. *See, e.g.*, Exs. I-N (exemplary infringement charts for each of the Asserted Patents).

87.   Regarding the Asserted Patents, Tesla's customers directly infringe by enabling the Software Version 9.0 and beyond[31] to run an infringing manner. Tesla induces such infringement by actively encouraging users to sign up for and use Tesla's software on their vehicle's as well as hold multiple customer oriented presentations about the advances in the software.
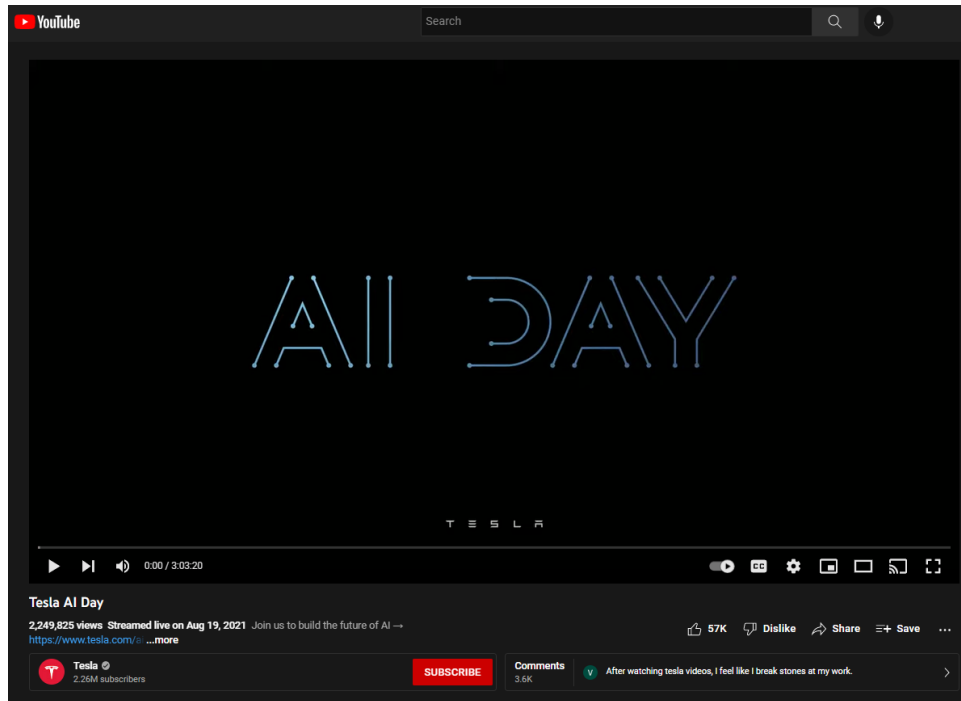
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[30] Tesla, *Tesla Autonomy Day*, YouTube (Apr. 22, 2019), https://www.youtube.com/watch?v=Ucp0TTmvqOE; Fred Lambert, *Elon Musk hints at Tesla's not-so-secret Dojo AI-training supercomputer* capacity, Electrek (Aug. 17, 2020), https://electrek.co/2020/08/17/elon-musk-tesla-secret- Dojo-ai-training-supercomputer/.

[31] Tesla Fleet Vehicles running Tesla's enhanced autopilot software and/or Tesla's full self-driving software.

Enhanced Autopilot

In addition to the functionality and features of Autopilot, Enhanced Autopilot also includes:

- **Navigate on Autopilot**: Actively guides your car from a highway's on-ramp to off-ramp, including suggesting lane changes, navigating interchanges, automatically engaging the turn signal and taking the correct exit.
- **Auto Lane Change**: Assists in moving to an adjacent lane on the highway when Autosteer is engaged.
- **Autopark**: Helps automatically parallel or perpendicular park your car, with a single touch.
- **Summon**: Moves your car in and out of a tight space using the mobile app or key.
- **Smart Summon**: Your car will navigate more complex environments and parking spaces, maneuvering around objects as necessary to come find you in a parking lot.

Full Self-Driving Capability

In addition to the functionality and features of Autopilot and Enhanced Autopilot, Full Self-Driving Capability also includes:

- **Traffic and Stop Sign Control (Beta)**: Identifies stop signs and traffic lights and automatically slows your car to a stop on approach, with your active supervision
- **Upcoming**:
  - Autosteer on city streets

The currently enabled Autopilot, Enhanced Autopilot and Full Self-Driving features require active driver supervision and do not make the vehicle autonomous. Full autonomy will be dependent on achieving reliability far in excess of human drivers as demonstrated by billions of miles of experience, as well as regulatory approval, which may take longer in some jurisdictions. As Tesla's Autopilot, Enhanced Autopilot and Full Self-Driving capabilities evolve, your car will be continuously upgraded through over-the-air software updates.

How does Autopilot work?
As of mid-February 2022, all vehicles built for the North American market will feature Tesla Vision, which uses eight cameras and powerful neural net processing to see the environment around the car and deliver Autopilot features. This camera suite provides occupants with an awareness of their surroundings that a driver alone would not otherwise have. A powerful onboard computer processes these inputs in a matter of milliseconds to help make driving safer and less stressful.

Source: Tesla, *Autopilot*, https://www.tesla.com/autopilot (last visited November 3, 2022).

88.   Tesla also induces infringement through its customer oriented presentations such as its Autonomous Day and AI Days which encourage users to purchase and use the self-driving technology in an infringing manner.
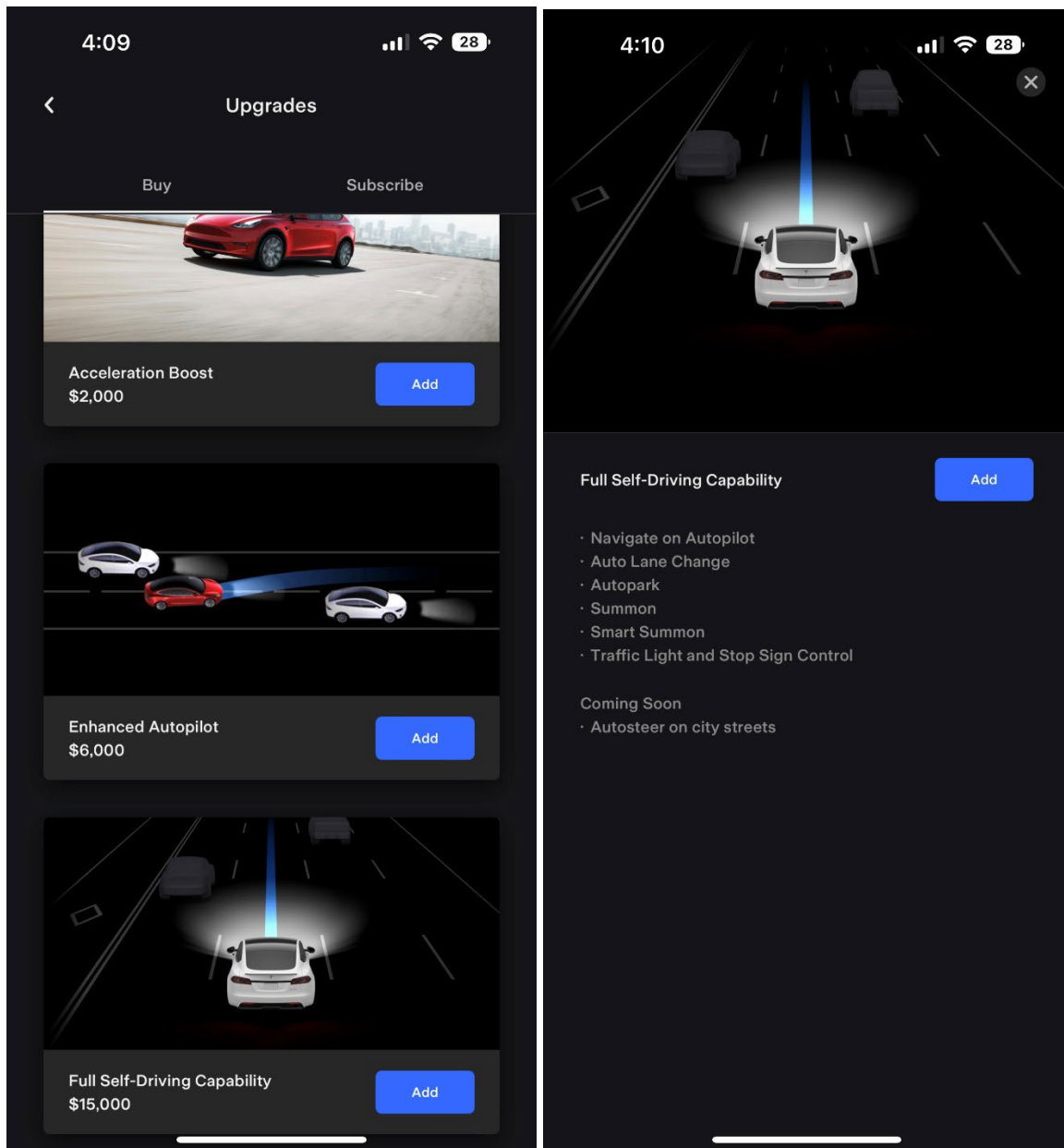
37

Source: *See* Tesla, *Tesla AI Day*, YouTube (Aug. 19, 2021), https://www.youtube.com/watch?v=j0z4FweCy4M&t=3s.
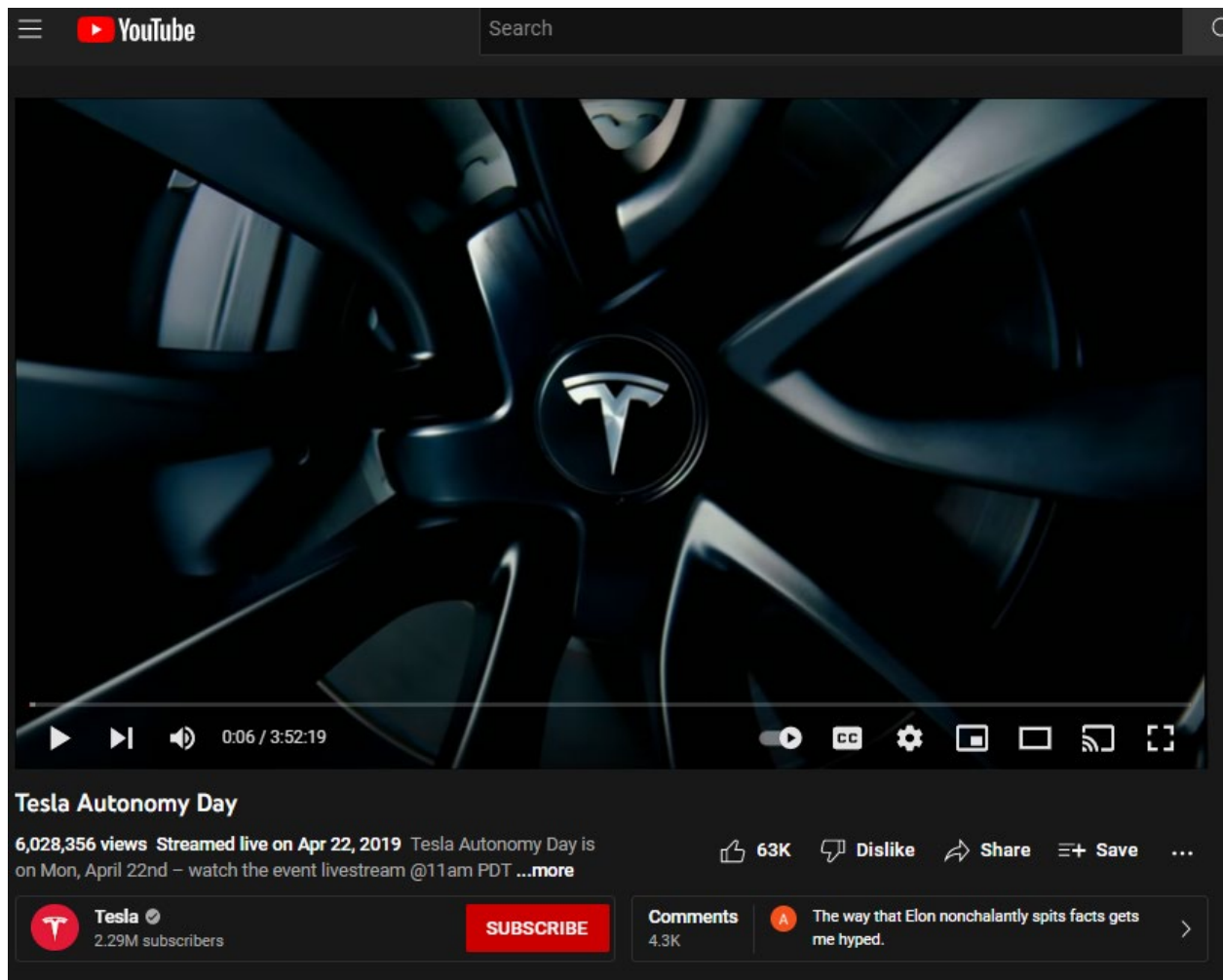
Source: Tesla, *Tesla Autonomy Day*, YouTube (Apr. 22, 2019), https://www.youtube.com/watch?v=Ucp0TTmvqOE

89.   Tesla also induces infringement via its Mobile Application, which encourages users to purchase and use self-driving technology.
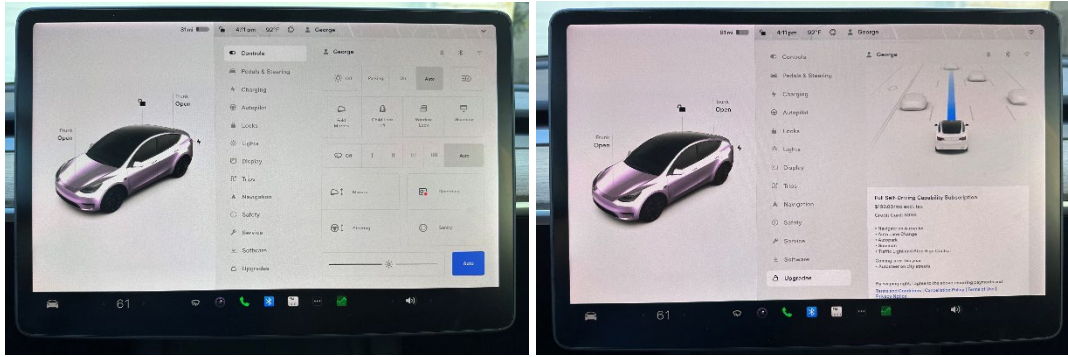
39

Source: Screenshots of Tesla's application taken on iPhone 14 Pro using the Tesla application version 4.13.1.

90.   Tesla also induces infringement via the display in each Fleet Vehicle, which encourages users to purchase self-driving technology and directly infringe

Source: Images of Tesla Model Y taken Tesla's Model Y user interface.

91.   As a result of Tesla's direct and indirect infringement, Autonomous Devices has suffered and will continue to suffer harm in the form of reasonable royalties and/or lost profits. Autonomous Devices seeks damages for infringing acts beginning upon issuance of the Asserted Patents.

92.   On information and belief, Tesla had actual or constructive knowledge and notice of infringement as to each of the Asserted Patent. With notice of the Asserted Patents, Tesla has proceeded to directly infringe by making, having made, using, testing, designing, selling, offering to sell, and/or importing in this district and elsewhere in the United States, the Tesla Fleet Vehicles and Dojo computer that infringe the Asserted Patents. Tesla has been placed on actual notice of the Asserted Patents at least as early as the filing of this Original Complaint. Additionally, the filing of this Original Complaint also constitutes notice in accordance with 35 U.S.C. § 287.

93.   Tesla's infringement of the Asserted Patents has been, and continues to be, without permission, consent, authorization, or license.

COUNT ONE – INFRINGEMENT OF THE '974 PATENT

94.   Autonomous Devices incorporates by reference the preceding paragraphs as though fully set forth herein.

95.   With knowledge of the '974 Patent, Tesla has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claims 1 and 18 and dependent claim 14 of the '974 Patent by making, testing, using, selling, and/or offering for sale its Vehicles with Infringing Software[32] in the United States, in violation of 35 U.S.C. § 271(a). *See* Ex. I.

96.   Tesla Fleet Vehicles, including Tesla Models S, 3, X, and Y, with Software Version 9.0 and beyond, meet each and every element of at least claims 1, 14 and 18 of the '974 Patent, either literally or equivalently.

97.   Tesla has had actual and/or constructive knowledge of the existence of the '974 Patent since no later the filing of this Original Complaint.

98.   With knowledge of the '974 Patent, Tesla has indirectly infringed one or more claims thereof under 35 U.S.C. § 271(b) through the active inducement of direct infringement by intending to encourage, and in fact encouraging others to install Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y sold and used within the United States in an infringing manner that practiced the inventions claimed by the '974 Patent, including at least claims 1, 14 and 18. Tesla has actively induced such direct infringement through its communications with customers, thereby providing, *inter alia*, functionality, instructions, and other assistance that have served to facilitate, promote, and cause drivers of Tesla Models S, 3, X and Y, and potentially others yet unknown, to directly infringe at least claims 1, 14 and 18 of the '974

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[32] Tesla Fleet Vehicles, including Tesla Models S, 3, X, and Y, with Software Version 9.0 and beyond.

Patent, as described in Ex. I. Upon information and belief, Tesla has performed the acts that constitute inducement of infringement with the knowledge or willful blindness that the resulting acts induced thereby would constitute direct infringement by drivers of Tesla Models S, 3, X, and Y, and/or potentially by others as yet unknown.

99.   With knowledge of the '974 Patent, Tesla has also indirectly infringed one or more claims thereof under 35 U.S.C. § 271(c) by making, selling, offering for sale, using, making available for use, and/or importing within or into the United States its Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y, and/or potentially by others yet unknown, knowing that such devices and functionality are especially made or especially adapted for use in direct infringements of the '974 Patent, including at least claims 1, 14, and 18 and knowing that such functionality is not a staple article or commodity of commerce suitable for substantial non-infringing use.

100.   As a direct and proximate consequence of Tesla's infringement of the '974 Patent, Autonomous Devices has suffered damages in an amount not yet determined for which Autonomous Devices is entitled to relief.

COUNT TWO – INFRINGEMENT OF THE '344 PATENT

101.   Autonomous Devices incorporates by reference the preceding paragraphs as though fully set forth herein.

102.   With knowledge of the '344 Patent, Tesla has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claim 1 and dependent claim 3 of the '344 Patent by making, testing, using, selling, and/or offering for sale its Vehicles with Infringing Software in the United States, in violation of 35 U.S.C. § 271(a). *See* Ex. J.

103.   Tesla Fleet Vehicles, including Tesla Models S, 3, X, and Y, with Software Version 9.0 and beyond, meet each and every element of at least claims 1 and 3 of the '344 Patent, either literally or equivalently.

104.   Tesla has had actual and/or constructive knowledge of the existence of the '344 Patent since no later than the filing of this Original Complaint.

105.   With knowledge of the '344 Patent, Tesla has indirectly infringed one or more claims thereof under 35 U.S.C. § 271(b) through the active inducement of direct infringement by intending to encourage, and in fact encouraging others to install Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y sold and used within the United States in an infringing manner that practiced the inventions claimed by the '344 Patent, including at least claims 1 and 3. Tesla has actively induced such direct infringement through its communications with customers, thereby providing, *inter alia*, functionality, instructions, and other assistance that have served to facilitate, promote, and cause drivers of Tesla Models S, 3, X and Y, and potentially others yet unknown, to directly infringe at least claims 1 and 3 of the '344 Patent, as described in Ex. J. Upon information and belief, Tesla has performed the acts that constitute inducement of infringement with the knowledge or willful blindness that the resulting acts induced thereby would constitute direct infringement by drivers of Tesla Models S, 3, X, and Y, and/or potentially by others as yet unknown.

106.   With knowledge of the '344 Patent, Tesla has also indirectly infringed one or more claims thereof under 35 U.S.C. § 271(c) by making, selling, offering for sale, using, making available for use, and/or importing within or into the United States its Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y, and/or potentially by others yet unknown, knowing that such devices and functionality are especially made or especially adapted for use in

direct infringements of the '344 Patent, including at least claims 1 and 3 and knowing that such functionality is not a staple article or commodity of commerce suitable for substantial non-infringing use.

107. As a direct and proximate consequence of Tesla's infringement of the '344 Patent, Autonomous Devices has suffered damages in an amount not yet determined for which Autonomous Devices is entitled to relief.

COUNT THREE – INFRINGEMENT OF THE '449 PATENT

108. Autonomous Devices incorporates by reference the preceding paragraphs as though fully set forth herein.

109. With knowledge of the '449 Patent, Tesla has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claims 1 and 17 of the '449 Patent by making, testing, using, selling, and/or offering for sale its Vehicles with Infringing Software in the United States, in violation of 35 U.S.C. § 271(a). *See* Ex. K.

110. Tesla Fleet Vehicles, including Tesla Models S, 3, X, and Y, with Software Version 9.0 and beyond, meet each and every element of at least claims 1 and 17 of the '974 Patent, either literally or equivalently.

111. Tesla has had actual and/or constructive knowledge of the existence of the '449 Patent since no later than the filing of this Original Complaint.

112. With knowledge of the '449 Patent, Tesla has indirectly infringed one or more claims thereof under 35 U.S.C. § 271(b) through the active inducement of direct infringement by intending to encourage, and in fact encouraging others to install Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y sold and used within the United States in an infringing manner that practiced the inventions of one or more claims of the '449 Patent, including at least

claims 1 and 17. Tesla has actively induced such direct infringement through its communications with customers, thereby providing, *inter alia*, functionality, instructions, and other assistance that have served to facilitate, promote, and cause drivers of Tesla Models S, 3, X and Y, and potentially others yet unknown, to directly infringe at least claims 1 and 17 of the '449 Patent, as described in Ex. K. Upon information and belief, Tesla has performed the acts that constitute inducement of infringement with the knowledge or willful blindness that the resulting acts induced thereby would constitute direct infringement by drivers of Tesla Models S, 3, X, and Y, and/or potentially by others as yet unknown.

113.   With knowledge of the '449 Patent, Tesla has also indirectly infringed one or more claims thereof under 35 U.S.C. § 271(c) by making, selling, offering for sale, using, making available for use, and/or importing within or into the United States its Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y, and/or potentially by others yet unknown, knowing that such devices and functionality are especially made or especially adapted for use in direct infringements of the '449 Patent, including at least claims 1 and 17 and knowing that such functionality is not a staple article or commodity of commerce suitable for substantial non-infringing use.

114.   As a direct and proximate consequence of Tesla's infringement of the '449 Patent, Autonomous Devices has suffered damages in an amount not yet determined for which Autonomous Devices is entitled to relief.

COUNT FOUR – INFRINGEMENT OF THE '583 PATENT

115.   Autonomous Devices incorporates by reference the preceding paragraphs as though fully set forth herein.

116.   With knowledge of the '583 Patent, Tesla has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claim 4 of the '583 Patent by making, testing, using, selling, and/or offering for sale its Vehicles with Infringing Software in the United States, in violation of 35 U.S.C. § 271(a). *See* Ex. L. Tesla Fleet Vehicles, including Tesla Models S, 3, X, and Y, with Software Version 9.0 and beyond, meet each and every element of at least claim 4 of the '583 Patent, either literally or equivalently.

117.   Tesla has had actual and/or constructive knowledge of the existence of the '583 Patent since no later than the filing of this Original Complaint.

118.   With knowledge of the '583 Patent, Tesla has indirectly infringed one or more claims thereof under 35 U.S.C. § 271(b) through the active inducement of direct infringement by intending to encourage, and in fact encouraging others to install Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y sold and used within the United States in an infringing manner that practiced the inventions of one or more claims of the '583 Patent, including at least claim 4. Tesla has actively induced such direct infringement through its communications with customers, thereby providing, *inter alia*, functionality, instructions, and other assistance that have served to facilitate, promote, and cause drivers of Tesla Models S, 3, X and Y, and potentially others yet unknown, to directly infringe at least claim 4 of the '583 Patent, as described in Ex. L. Upon information and belief, Tesla has performed the acts that constitute inducement of infringement with the knowledge or willful blindness that the resulting acts induced thereby would constitute direct infringement by drivers of Tesla Models S, 3, X, and Y, and/or potentially by others as yet unknown.

119.   With knowledge of the '583 Patent, Tesla has also indirectly infringed one or more claims thereof under 35 U.S.C. § 271(c) by making, selling, offering for sale, using, making available for use, and/or importing within or into the United States its Software Version 9.0 and beyond onto Tesla Models S, 3, X and Y, and/or potentially by others yet unknown, knowing that such devices and functionality are especially made or especially adapted for use in direct infringements of the '583 Patent, including at least claim 4 and knowing that such functionality is not a staple article or commodity of commerce suitable for substantial non-infringing use.

120.   As a direct and proximate consequence of Tesla's infringement of the '583 Patent, Autonomous Devices has suffered damages in an amount not yet determined for which Autonomous Devices is entitled to relief.

COUNT FIVE – INFRINGEMENT OF THE '134 PATENT

121.   Autonomous Devices incorporates by reference the preceding paragraphs as though fully set forth herein.

122.   With knowledge of the '134 Patent, Tesla has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claim 1 of the '134 Patent by making, testing, using, selling, and/or offering for sale its Dojo supercomputer and/or Infringing Simulation Software in the United States, in violation of 35 U.S.C. § 271(a). *See* Ex. M.

123.   The Dojo supercomputer alone or together with Tesla Simulation Software and the Tesla Fleet Vehicles, meet each and every element of at least claims 1 of the '134 Patent, either literally or equivalently.

124.   Tesla has had actual and/or constructive knowledge of the existence of the '134 Patent since no later than the filing of this Original Complaint.

125.   With knowledge of the '134 Patent, Tesla has indirectly infringed one or more claims thereof under 35 U.S.C. § 271(b) through the active inducement of direct infringement by intending to encourage, and in fact encouraging others to use the Dojo supercomputer and/or Infringing Simulation Software. Tesla has actively induced such direct infringement through its communications with customers, thereby providing, *inter alia*, functionality, instructions, and other assistance that have served to facilitate, promote, and cause others to use the Dojo supercomputer and/or Infringing Simulation Software in an infringing manner that practiced the inventions of one or more claims of the '134 Patent, including claim 1, as described in Ex. M. Upon information and belief, Tesla has performed the acts that constitute inducement of infringement with the knowledge or willful blindness that the resulting acts induced thereby would constitute direct infringement by users of the Dojo supercomputer and/or Infringing Simulation Software.

126.   With knowledge of the '134 Patent, Tesla has also indirectly infringed one or more claims thereof under 35 U.S.C. § 271(c) by making, selling, offering for sale, using, making available for use, and/or importing within or into the United States its Dojo supercomputer, Infringing Simulation Software, and/or potentially by others yet unknown, knowing that such devices and functionality are especially made or especially adapted for use in direct infringements of the '134 Patent, including at least claim 1 and knowing that such functionality is not a staple article or commodity of commerce suitable for substantial non-infringing use.

127.   As a direct and proximate consequence of Tesla's infringement of the '134 Patent, Autonomous Devices has suffered damages in an amount not yet determined for which Autonomous Devices is entitled to relief.

COUNT SIX – INFRINGEMENT OF THE '585 PATENT

128.   Autonomous Devices incorporates by reference the preceding paragraphs as though fully set forth herein.

129.   With knowledge of the '585 Patent, Tesla has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claim 1 of the '585 Patent by making, testing, using, selling, and/or offering for sale its Dojo supercomputer and/or Infringing Simulation Software in the United States, in violation of 35 U.S.C. § 271(a). *See* Ex. N.

130.   Dojo supercomputer alone or together with Tesla Simulation Software and the Tesla Fleet Vehicles, meet each and every element of at least claim 1 of the '585 Patent, either literally or equivalently.

131.   Tesla has had actual and/or constructive knowledge of the existence of the '585 Patent since no later than the filing of this Original Complaint.

132.   With knowledge of the '585 Patent, Tesla has indirectly infringed one or more claims thereof under 35 U.S.C. § 271(b) through the active inducement of direct infringement by intending to encourage, and in fact encouraging others to use the Dojo supercomputer alone or together with Tesla Simulation Software within the United States in an infringing manner that practiced the inventions of one or more claims of the '583 Patent, including at least claim 1. Tesla has actively induced such direct infringement through its communications with customers, thereby providing, *inter alia*, functionality, instructions, and other assistance that have served to

facilitate, promote, and cause users to use Dojo supercomputer alone or together with Tesla Simulation Software Y, and potentially others yet unknown, to directly infringe at least claim 1 of the '583 Patent, as described in Ex. N. Upon information and belief, Tesla has performed the acts that constitute inducement of infringement with the knowledge or willful blindness that the resulting acts induced thereby would constitute direct infringement of users of the Dojo supercomputer alone or together with Tesla Simulation Software.

133.   With knowledge of the '583 Patent, Tesla has also indirectly infringed one or more claims thereof under 35 U.S.C. § 271(c) by making, selling, offering for sale, using, making available for use, and/or importing within or into the United States its Dojo supercomputer, Infringing Simulation Software, and/or potentially by others yet unknown, knowing that such devices and functionality are especially made or especially adapted for use in direct infringements of the '583 Patent, including at least claim 1 and knowing that such functionality is not a staple article or commodity of commerce suitable for substantial non-infringing use.

134.   As a direct and proximate consequence of Tesla's infringement of the '585 Patent, Autonomous Devices has suffered damages in an amount not yet determined for which Autonomous Devices is entitled to relief.

PRAYER FOR RELIEF

WHEREFORE, Autonomous Devices respectfully requests that this Court enter judgment in its favor as follows and award it the following relief:

A. Entry of judgment declaring that Tesla has directly infringed, induced others to infringe, and/or committed acts of contributory infringement with regard to one or more claims of each of the Asserted Patents;

B. An order awarding damages sufficient to compensate Autonomous Devices for Tesla's infringement of the Asserted Patents, but in no event less than a reasonable royalty, including supplemental damages post-verdict, together with pre-judgment and post-judgment interest and costs;

C. Enhanced damages pursuant to 35 U.S.C. § 284;

D. Entry of judgment declaring that this case is exceptional and awarding Plaintiff its costs and reasonable attorney fees under 35 U.S.C. § 285;

E. An accounting for acts of infringement;

F. Such other equitable relief which may be requested and to which the Plaintiff is entitled; and

G. Such other and further relief as the Court deems just and proper.

DEMAND FOR A JURY TRIAL

Autonomous Devices hereby respectfully requests a trial by jury of all issues so triable, pursuant to Federal Rules of Civil Procedure 38.

	/s/ Karen E. Keller
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Dated: November 7, 2022